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Parents' Career Values, Adaptability, Career-specific Parenting Behaviors and
Undergraduates' Career Adaptability

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Abstract

This study examined how Chinese parents' career values and adaptability predict their career-specific parenting behaviors and their children's career adaptability. A survey study was conducted among Chinese university students and their parents ($N = 264$), and the results generally support the mediation roles of career-specific parenting behaviors in linking parents' vocational characteristics and children's career adaptability. Specifically, parental support is positively related to parents' intrinsic fulfillment values, work-life balance values and career adaptability, and mediates their positive effects on undergraduates' career adaptability. Parental engagement mediates the negative effect of external compensation values and positive effect of work-life balance values on undergraduates' career adaptability. Parental interference is negatively related to parents' work-life balance values, and positively related to their external compensation values and career adaptability, but does not significantly predict undergraduates' career adaptability. These findings advance current understanding of the career construction theory.

Keywords: career values, career-specific parenting behaviors, career adaptability

Parents' Career Values, Adaptability, Career-specific Parenting Behaviors and
Undergraduates' Career Adaptability

Due to the volatile economy and the emergence of new employment patterns, contemporary careers are less reliant on organizational arrangements and more related to individual career management activities (Arthur, 1994; Guan, Arthur, Khapova, Hall, & Lord, in press). According to career construction theory (Savickas, 2013), individuals' willingness and capabilities to make changes to themselves and the surrounding environments serve as important antecedents for their career management behaviors and career-related outcomes. Career values describe the ultimate goals individuals desire to pursue in their careers (Ginzberg, Ginsburg, Axelrad, & Herma, 1951; Super, 1957), thus reflecting the vocational purposes that motivate and guide individuals' career develop (Savickas, 2002). Consequently, career values have been found to predict important career-related activities and outcomes, such as work engagement (Sortheix, Dietrich, Chow, & Salmela-Aro, 2013), job choice decisions (Ben-Shem & Avi-Itzhak, 1991; Judge & Bretz, 1992), career decision-making self-efficacy (Zhou, Guan, Xin, Mak, & Deng, 2016), person-environment fit (Sortheix, Chow, & Salmela-Aro, 2015), job satisfaction and turnover intentions (Vansteenkiste, Neyrinck, Niemiec, Soenens, Witte, & Broeck, 2007). Career adaptability refers to the psychological capabilities that enable individuals to cope with "current and anticipated vocational development tasks, occupational transitions, and work traumas" (Savickas, 2013, p.157), and has been found to be positively related to favorable vocational outcomes, such as job search success (Guan et al., 2013; Guan et al., 2014), professional competence (Guo et al., 2014; Guan, Yang, Zhou, Tian, & Eves, 2016), and career satisfaction (Guan, Zhou, Ye, Jiang, &

Zhou, 2015c; Zacher, 2014).

Previous research on career values and adaptability has mainly focused on their important roles in guiding and enabling people to make progress in their own career development, but their effects in other life domains have been largely neglected. Career construction theory (Savickas, 2013) posits that individuals' career development is embedded in broader life processes and career roles are often intertwined with the functions of other life roles, especially family roles (e.g., spouse role, parent role). It follows that parents' vocational characteristics may influence their involvement in their children's career development, and so their children's vocational outcomes. In support of this view, it has been found that parents' self-efficacy and career aspirations significantly predict their children's perceived career efficacy and academic aspirations (Bandura, Barbaranelli, Vittorio, & Pastorelli, 2001). In addition, Porfeli, Wang and Hartung (2008) also found that parents' work experience and affect influence children's motivation to work.

The impact of parents' vocational characteristics on children's career development still exists even after youths enter college. For example, research among undergraduate students has revealed that their career self-efficacy (Lim & Loo, 2003; Zhao, Lim, & Teo, 2012) and intrinsic work motivation (Lim & Sng, 2006) are negatively predicted by parents' job insecurity. These research findings offer important insights on how parents' career experiences shape undergraduates' career development. However, research directly addressing how parents' career values and adaptability impact undergraduates' vocational characteristics is scarce (Savickas, 2013).

The current study addresses this gap by examining how Chinese parents' career values

and adaptability impact their undergraduate children's career adaptability. We chose career adaptability as the key outcome variable because it has been shown to predict a variety of important career outcomes among Chinese undergraduates, such as career decision-making self-efficacy (Zhou, Guan, Xin, Mak, & Deng, 2016), professional competence (Guo et al., 2014) and job search success during graduation (Guan et al., 2013; Guan et al., 2014).

Undergraduates are in a critical stage of exploring future career possibilities and preparing for the school-to-work transition (Super, 1980). Due to the various uncertainties and pressures associated with this important stage of career exploration, the support and interventions from parents still play a significant role in shaping undergraduates' adaptive abilities (Guan et al., 2015b). Findings of this study will thus offer direct evidence of how Chinese parents' career values and adaptability impact undergraduates' career adaptability.

From the perspective of career construction theory (Savickas, 2013), parents not only manage their own careers, but also engage in their family roles and provide guidance for their children's career development. Darling and Steinberg's (1993) contextual model of parenting offers important insights into the mechanisms underpinning the effects of parents' career values and adaptability on undergraduates' career adaptability. According to Darling and Steinberg (1993), parents often project their own values and preferences onto the socialization process of their children. Consequently, parents adopt various practices to communicate and reinforce the goals they want their children to achieve, which in turn shape their children's developmental outcomes. Parenting behaviors thus capture the mechanisms that explain how parents' desired states are transformed into children's values, behaviors and abilities (see also Spera, 2005). For example, it has been found that mothers' psychological

control and inductive reasoning behaviors convey the negative effects of mothers' collectivistic and social harmony values to adolescents' aggression behaviors (Shuster, Li, & Shi, 2012).

Following Darling and Steinberg's (1993) model, we propose that parents' career values and adaptability may influence the way they are involved in their children's career development, which in turn influences their offspring's career adaptability. In this study, we used the construct of career-specific parenting behaviors to capture the parenting practices related to children's career development (Dietrich & Kracke, 2009), which have been found to be significant predictors for Chinese undergraduates' career exploration activities and career adaptability (Guan et al., 2015b). We propose a mediation model such that parents' career values and adaptability significantly predict their career-specific parenting behaviors, which in turn predict undergraduates' career adaptability.

Parents' Career Values, Career Adaptability and Career-specific parenting Behavior

Career values describe individuals' desires and ultimate career goals, and have been operationalized in various ways (Ginzberg et al., 1951; Super, 1957). For example, Ginzberg et al. (1951) differentiated the values of intrinsic fulfillment (pleasure in the working activity and career accomplishments), external rewards (e.g., monetary rewards, prestige, social status) and concomitants (good social and environmental conditions). In this study, we adopt the career success criteria model developed in the Chinese context to represent career values (Zhou, Sun, Guan, Li, & Pan., 2013), because these criteria reflect one's beliefs about desirable end states, which are the essence of career values (Edwards & Cable, 2009). Three types of career values are differentiated in this model (Zhou et al., 2013): Intrinsic fulfillment,

which refers to the endorsement of psychological fulfillments (e.g., the sense of achievement and joy from one's career) as career values; external compensation, which is defined as the values related to extrinsic rewards, such as money, power and status; work-life balance, which reflects the values regarding balancing work and life goals. These success criteria not only have their theoretical basis in extant career values models (e.g., Ginzberg et al., 1951), but also capture the cultural-specific career values in the Chinese context. Therefore, they have been used to examine the career construction process of Chinese people (e.g., Zhou et al., 2016). The construct of career-specific parenting behaviors (Dietrich & Kracke, 2009) consists of parental support (i.e., parents support youths' career development by providing valuable suggestions or opportunities), parental interference (i.e., parents impose their own ideas on youths' career preparation and choices) and parental engagement (i.e., parents get fully involved in their children's career preparation).

When parents have high intrinsic fulfillment values, they focus more on intrinsic career motives and the psychological meanings (e.g., self-worth, sense of achievement, joy) associated with their career development (Zhou et al., 2013). Since individuals who endorse intrinsic career values tend to choose jobs, occupations and work environments that fit their own preferences, interests, skills and abilities (Super, 1957), it has been found that intrinsic career values positively predict employees' work engagement (Sortheix et al., 2013), career decision-making self-efficacy (Zhou et al., 2016), person-environment fit (Sortheix et al., 2015) and job satisfaction (Vansteenkiste et al., 2007). When parents provide guidance for their children's career development, they may reflect upon their own experiences and project these intrinsic fulfillment values onto the interactions with their children (Darling &

Steinberg, 1993).

In order to help children to match their personal interests to future career choices, parents need to pay close attention to their children's career activities and maintain a high level of engagement in this process (Dietrich & Kracke, 2009). We thus propose that parents' intrinsic fulfillment values are positively related to their engagement in their children's career development (H1a). In addition, due to the positive effects of intrinsic career values on their own person-environment fit (Sortheix et al., 2015), job satisfaction (Vansteenkiste et al., 2007) and career decision-making self-efficacy (Zhou et al., 2016), parents endorsing intrinsic career values should also be more willing and able to provide relevant information and opportunities to support their children's career exploration activities. Accordingly, we propose that parents' intrinsic fulfillment values are positively related to their support to children's career development (H1b). Since the intrinsic career values emphasize the importance of autonomy and self-direction (Sortheix et al., 2015; Zhou et al., 2013; Zhou et al., 2016), we propose that parents who endorse these values should be more open to their children's personal choices and less likely to impose their own ideas on their children, which will result in a lower level of parental interference (H1c).

Hypothesis 1: Parents' intrinsic fulfillment values are positively related to parental engagement (H1a) and parental support (H1b), but negatively related to parental interference (H1c).

When parents emphasize external compensation in their own career development, they consider making money or pursuing power as important career goals for themselves (Zhou et al., 2013). We propose that when parents project these values to their children, they

may be motivated to engage in children's career development with the hope of helping their children to attain more external rewards (H2a). However, the focus on external rewards may make parents overlook their children's personal needs and interests (Young, Valach, Paseluikho, Wong, DeVries, & Turkel, 2001). As a result, the suggestions or opportunities offered by these parents may not be relevant to children's preferences or interests, thereby reducing their support for children's career development (H2b). In addition, since the pursuit of extrinsic goals has been found to be positively related to social dominance orientation, which reflects a general preference for hierarchical rather than equality social relations (Duriez, Soenens, & Vansteenkiste, 2008), we propose that parents with external compensation values are more likely to interfere with their children's career activities, and consequently impose their preferred choices on their children (H2c).

Hypothesis 2: Parents' external compensation values are positively related to parental engagement (H2a), negatively related to parental support (H2b), and positively related to parental interference (H2c).

When parents emphasize work-life balance values, they care a great deal about the meaning of work in their lives and try to balance their work and other life goals (Zhou et al., 2013). Parents with high work-life balance values may also project these values to their children and try to help their children to achieve the goal of work-life balance in their future career development. Moreover, since children's career development also represents an important life goal for many parents, we propose that parents with high work-life balance values are particularly motivated to engage in the career development activities of their children (H3a). To help children to understand how to balance the various roles in work and

life, parents need to provide support and resources to help children's career exploration and decision-making activities (H3b). In order to help youths to search for the meaning of work in their own lives, parents need to respect their children's opinions and are less likely to impose their own ideas on their children (H3c).

Hypothesis 3: Parents' work-life balance values are positively related to parental engagement (H3a) and parental support (H3b) and negatively related to parental interference (H3c).

Finally, when parents have a high level of career adaptability, they possess the psychological capabilities to address the various difficulties in their career development (Savickas, 1997; Savickas & Porfeli, 2012). A high level of career adaptability will make it easy to get involved in children's career development and thus increase parents' engagement in their children's career-related activities (H4a). Moreover, as parents with a high level of career adaptability understand how to prepare for future career possibilities, they are more able to provide useful support and advice to their children (H4b). However, since parents with a high level of career adaptability also have strong efficacious beliefs in their own judgment and decision-making abilities, they may tend to take control of their children's career choices, forcing their children to follow the parents' preferences (H4c).

Hypothesis 4: Parents' career adaptability is positively related to parental engagement (H4a), parental support (H4b), and parental interference (H4c).

As discussed above, parents' career values and adaptability may influence the ways they become involved in their children's career development. In the next section, we further propose that these career-specific parenting behaviors will serve as important mediators for

the effects of parents' career values and adaptability on their undergraduate children's career adaptability.

The Mediation Model

Career construction theory (Savickas, 2013) posits that individuals can proactively improve their career adaptability by engaging in various forms of career exploration activities. Previous research (e.g., Guan et al., 2015b; Guan et al., 2017) suggests that career-specific parenting behaviors serve as important motivating forces for undergraduates' proactive career exploration behaviors by fulfilling their needs for relatedness, competence and autonomy, which represent the basic human needs outlined in the self-determination theory (Deci & Ryan, 1985). Following these views, we propose that the three types of career-specific parenting behaviors may serve as significant predictors for undergraduates' career adaptability.

Specifically, a high level of parental career engagement helps youths to develop a high sense of connectedness to significant others during career exploration, thus may have a positive effect on their career exploration activities and career adaptability (Deci & Ryan, 1985; Dietrich & Kracke, 2009; Guan et al., 2015b). Parental support can help youths evaluate career-relevant information and explore different opportunities in a more effective way, which can promote youths' sense of competence and help to improve their career adaptability (Deci & Ryan, 1985; Soresi, Nota, Ferrari, & Ginevra, 2014). Parental career interference reflects parents' tendency to impose their own career views on their children, which may threaten youths' sense of autonomy and, consequently, reduce youths' motivation to develop their own career abilities (Deci & Ryan, 1985; Dietrich & Kracke, 2009; Guan et

al., 2015b).

Consistent with above discussions, it has been found that parental engagement and support are positively related to Chinese students' career exploration and adaptability (Guan, Capezio, Restubog, Read, Lajom, & Li, 2016; Guan et al., 2015b; Tian & Fan, 2014), and parental interference has an indirect negative effect on career adaptability through the mediation of career exploration (Guan et al., 2015b). Drawing on career construction theory and the contextual model of parenting (Darling & Steinberg, 1993), we argue that these three types of parental behaviors may serve as the proximal predictors for youths' career adaptability and mediate the effects of parental career values and adaptability on youths' career adaptability.

Hypothesis 5: Parental engagement (H5a), parental support (H5b), and parental interference (H5c) mediate the effects of parents' intrinsic fulfillment values, external compensation values, work-life balance values and career adaptability on children's career adaptability.

Method

Procedure and Participants

Data were collected in 2014 from a career center of a university in northern China. Participants were informed that the data would be used only for research purposes, and their personal information would be kept confidential. Each participant was required to contact a parent (i.e., father or mother), who would complete the survey on demographic variables, parental career values, adaptability, and career-specific parenting behaviors. The completed questionnaires were returned to the career center by mail in postage-prepaid envelopes.

Parents were asked to sign consent forms before completing the questionnaires. Students were organized to complete questionnaires on their demographics and career adaptability in a large classroom. To reduce the attrition rate, students who provided complete responses to the two questionnaires were rewarded with a gift worth 10 RMB (approximately 2 USD).

Three hundred students registered for this study, and 265 (88.33%) of them provided complete responses from both students and parents. We dropped one case based on outlier test for a final sample of 264 participants. Among them, students' average age was 21.00 ($SD = 1.29$); 78 (29.50%) were males and 186 (70.50%) were females. Ninety-nine students (37.50%) were first-year students, 103 (39.02%) were second-year, 55 (20.83%) were third-year, and the remaining 7 (2.65%) were fourth-year. Among the parents, 165 (62.50%) were fathers and 99 (37.50%) were mothers. Their average age was 47.20 ($SD = 4.34$). In terms of education level, 38 (14.39%) of the parents had an elementary school education, 115 (43.56%) of them had a junior high school education, 75 (28.41%) of them had a senior high school education, 23 (8.71%) of them had an associate college degree, 11 (4.17%) had a Bachelor's degree, and 2 (0.76%) had a Master's degree. These parents' average personal annual income was 29,500 RMB (approximately 4,900 USD, $SD = 27,100$ RMB, Range = 235,000 RMB). The average family annual income of our sample was 44,200 RMB (approximately 6,900 USD, $SD = 36,500$ RMB, Range = 196,000 RMB).

Instruments

Parents' career values. To measure parents' career values, we adopted the scale developed by Zhou et al. (2013) in the Chinese context, which consists of 21 items measuring the three dimensions of career values. Parents were asked to rate how much they agreed with

the items representing intrinsic fulfillment, external compensation and work-life balance values on a 5-point Likert scale ranging from 1 (*absolutely disagree*) to 5 (*absolutely agree*). Sample items were “one’s talents and potential capacities are fully utilized in his or her career” (intrinsic fulfillment), “one can get good material compensation from one’s work” (external compensation), and “one can take care of his or her family when developing his or her career” (work-life balance). The Chinese version of this scale has been found to have good reliability and content validity (Zhou et al., 2013). In this study, the Cronbach's alpha was .83 for intrinsic fulfillment (8 items), .88 for external compensation (7 items) and .89 for work-life balance (6 items).

Parents’ and students’ career adaptability. We used the Chinese version of the career adaptability scale adopted by Hou, Leung, Li, Li, and Xu (2012) from the original scale developed by Savickas and Porfeli (2012). Savickas and Porfeli (2012) developed the scale to measure the four first-order dimensions of career adaptability: career concern (e.g., “Thinking about what my future will be like”), career control (e.g., “Making decisions by myself”), career curiosity (e.g., “Probing deeply into questions I have”), and career confidence (e.g., “Working up to my ability”). As posited in career construction theory (Savickas, 2013), career adaptability is a high-order construct that consists of these four dimensions, i.e. concern, control, curiosity, and confidence. The four dimensions constitute the global indicator of career adaptability and results obtained from 13 different countries are supportive to this theoretical model (Savickas & Porfeli, 2012). The Chinese form showed good fit to this theoretical model in Hou et al.’s study (RMSEA = .064, SRMR = .057) with all observed items illustrating acceptable loadings (above .40) on first-order dimensions as

well as on the second-order general adaptability construct. The total score of this scale has been widely used to represent Chinese students' and employees' career adaptability in previous studies, and showed good predictive validity on career-related outcomes, such as Chinese university students' job search success (e.g., Guan et al., 2013) and Chinese employees' salary and career satisfaction (e.g., Guan et al., 2015c). Due to the theoretical consideration of treating career adaptability as a high-order construct (Savickas, 2013; Savickas & Porfeli, 2012) and the practical concern about collinearity associated with the high inter-correlations among its four dimensions, we used total scores rather than the four dimensions to test our hypotheses. Consistent with previous studies (e.g., Guan et al., 2015b; Zacher, 2014), students' and parents' scores of career adaptability were calculated by averaging the ratings of these 24 items. Parents and students were asked to evaluate their own adaptability on a 5-point Likert scale ranging from 1 (*not strong*) to 5 (*strongest*). In the current study, the Cronbach's alpha for the overall career adaptability was .93 for students and .94 for parents.

Career-specific parenting behaviors. We used the Chinese version of the career-specific parenting behavior scale to measure parents' behaviors (Guan et al., 2015b). The original measure was a 15-item scale developed by Dietrich and Kracke (2009) to assess adolescents' perceived parental career-related behaviors, with 5 items measuring each dimension, namely, parental support, interference, and engagement. Guan et al. (2015b) revised the scale into a parental version in the Chinese context by modifying the items to fit parents' perspective. For example, a sample original item "My parents support me in getting an apprenticeship" was revised into "I support my child in getting an apprenticeship". This

revised scale showed good predictive validity on university students' career exploration and career adaptability (Guan et al., 2015b). The validated Chinese parents' version was used in this study, and parents were instructed to rate their behaviors on a 5-point Likert scale ranging from 1 (*absolutely disagree*) to 5 (*absolutely agree*). In the current study, the Cronbach's alpha was .83 for parental support, .87 for parental interference and .88 for parental career engagement.

Control variables. Since parents' demographic background and socio-economic status could influence their career-specific parenting behaviors and children's career outcomes (e.g., Bandura et al., 2001; Goodale & Hall, 1976), we entered parents' age, education level and income in the 1st step of regression analyses to control their effects on career-specific parenting behaviors and youths' career adaptability. Our preliminary analysis indicated that parents' personal income and family income were highly correlated ($r = .77, p < .001$). To avoid the problem of collinearity, we included parents' personal income, but not family income in the final model as a control variable, since personal income serves as a more accurate indicator for a person's socio-economic status. In addition, as fathers and mothers may have different influences on children (e.g., Dietrich & Kracke, 2009), we included parents' gender (0 = mother, 1 = father) as a control variable when predicting career-specific parenting behaviors and youths' career adaptability. Third, to rule out the effects of students' demographic variables on outcome variables (Zacher, 2014), we included students' gender (0 = female, 1 = male), age and years of study as control variables.

Results

Preliminary analyses

Before testing the hypotheses, we conducted preliminary analyses to identify any problems that may result in biased inferences. We first identified that among 300 registered participants, 35 (11.67%) of them failed to provide responses from parents, so we did not use their data for analysis. We then checked and confirmed that in the remaining 265 (88.33%) cases, there were no missing data for all the variables. Second, we checked the distributions for all the continuous variables in the data and confirmed there were no univariate outliers (Z score > 3.29). We also screened the multivariate outliers with Mahalanobis distance and deleted one case with $p < .001$ in the corresponding χ^2 test, which resulted in a final sample size of 264. For the regression analyses ($N = 264$), we examined whether any violation of assumptions existed (Berry & Feldman, 1985). We checked and confirmed that the variables were normally distributed and that there were no curve-linear relations between predictors and the outcome variable (student career adaptability). Moreover, we checked the distribution of residuals of the regression and confirmed that it followed a normal distribution ($p > .05$). We also examined the variance inflation factors ($VIFs$) and found none of them exceeded the cutting point of 4 (Berry & Feldman, 1985). After this screening process, we used the data from 264 students and their parents to test our hypotheses.

Descriptive statistics and correlations

The descriptive statistics and correlations among the variables are shown in Table 1. Noticing that the average score of students' career adaptability was quite high ($Mean = 4.06$), we conducted additional analyses and found that distribution of the CA scores was quite dispersed with a range of 2.38 ($SD = .46$). We also conducted Kolmogorov-Smirnov Test as well as the Shapiro-Wilk Test, and found that students' CA scores followed a normal

distribution ($p > .05$). By checking previous research, we found that this average score is comparative to the mean scores obtained from Chinese university students in previous studies (e.g., Li et al., 2015, $CA\ Mean = 4.03$). Thus, we determined it was reasonable to continue analyses with the data.

Parents' intrinsic fulfillment values correlated significantly with parental support ($r = .41, p < .001$). Parents' external compensation values correlated significantly with parental interference ($r = .32, p < .001$) and parental engagement ($r = -.19, p < .01$). Parents' work-life balance values correlated significantly with parental support ($r = .39, p < .001$), parental interference ($r = -.18, p < .01$) and parental engagement ($r = .30, p < .001$). Parents' career adaptability correlated significantly with parental support ($r = .51, p < .001$) and parental engagement ($r = .19, p < .01$). Students' career adaptability was significantly related to parents' work-life balance values ($r = .22, p < .001$), parental support ($r = .27, p < .001$), parental engagement ($r = .19, p < .01$), and parents' career adaptability ($r = .21, p < .001$).

Mediation Analysis with Career-specific parenting Behaviors as Mediators

We conducted mediation analysis based on the procedure proposed by Preacher and Hayes (2008). According to this approach, to justify a mediation effect, we should demonstrate the following results: First, the independent variable is significantly related to a mediator; second, after controlling the effect of the independent variable, the mediator is significantly related to a dependent variable; third, the indirect effect of the independent variable on the dependent variable through the mediator is significant. Since there are multiple predictors and mediators in this model, we put all the variables into the same model when using SPSS macro PROCESS to run the bootstrapping-based analyses (Hayes, 2013).

According to Preacher and Hayes (2008), this procedure allows researchers to identify the total effects of predictors (parents' career values and adaptability) and mediators (parental behaviors) on the outcome variable (students' career adaptability); in addition, when multiple predictors and mediators are included in the same model, the estimation bias due to omitted variables is reduced; third, it allows researchers to examine the relative size of indirect effect associated with each mediation path, conditional on the presence of other paths. In addition, the bootstrapping analysis provides the most powerful method of estimating indirect effects under most conditions (Hayes, 2013), so we adopted this approach to examine the mediation model. All continuous variables were centered before analysis (Aiken & West, 1991).

The output of the mediation examination using PROCESS consists three parts: the mediator as the dependent variable model, the outcome variable as the dependent variable model, and the indirect effect calculation. Among them, the mediator model tests hypotheses 1- 4, the outcome model and the indirect effects calculation test hypothesis 5. As shown in Table 2, parents' intrinsic fulfillment values were positively related to parental support ($\beta = .17, p < .05$) but not parental engagement ($\beta = -.15, ns$) or parental interference ($\beta = -.14, ns$). Thus, hypothesis 1b was supported, but 1a and 1c did not get support. Parents' external compensation values were positively related to parental interference ($\beta = .41, p < .001$), negatively related to parental engagement ($\beta = -.25, p < .001$), but not significantly related to parental support ($\beta = .02, ns$). Thus, hypothesis 2c was supported, but 2a and 2b did not get support. Parents' work-life balance values were positively related to parental engagement ($\beta = .43, p < .001$) and support ($\beta = .16, p < .05$) and negatively related to parental interference ($\beta = -.27, p < .01$). Thus, hypotheses 3a, 3b and 3c were supported. Parents' career

adaptability was positively related to parental support ($\beta = .46, p < .001$) and parental interference ($\beta = .21, p < .05$). Thus, hypotheses 4b and 4c were supported, but 4a was not supported.

The results of the outcome variable as the dependent variable model shows that after the effects of parents' values and career adaptability were controlled, only parental support ($\beta = .13, p < .01$) and parental engagement ($\beta = .07, p < .05$) had significant positive effects on students' career adaptability. These results mean that parental support and parental engagement are possible mediators for the effects of parental career values and adaptability on students' career adaptability (Preacher & Hayes, 2008).

We then conducted bootstrapping analysis to examine the indirect effects. We included all three parental behaviors, i.e., parental engagement, parental support, and parental interference, into analyses, to examine their unique effects. The results showed that the indirect effects from parents' external compensation values (indirect effect = $-.02$, 95% CI = $[-.048, -.003]$) and work-life balance values (indirect effect = $.03$, 95% CI = $[.004, .068]$) on students' career adaptability through parental engagement were significant, which supported H5a. The indirect effects from parents' intrinsic fulfillment values (indirect effect = $.02$, 95% CI = $[.001, .068]$), work-life balance values (indirect effect = $.02$, 95% CI = $[.004, .052]$) and parents' career adaptability (indirect effect = $.06$, 95% CI = $[.01, .12]$) on children's career adaptability through parental support were also significant, which provided support for H5b. We should note that after the mediators were entered into the regression, the effects of all the predictors, i.e., parents' career values and career adaptability, were non-significant. Further analyses showed that parental support and parental engagement collectively mediated all the

effects from these predictors to youths' career adaptability (see Figure 1 for more details).

Supplementary Analysis

To examine whether fathers and mothers play different roles in shaping students' career adaptability, we examined three-way interactions among parents' career values or career adaptability, parents' identity (father or mother), and students' gender in the current mediation model. The results showed that there was a three-way interaction among parents' career adaptability, children's gender, and parents' identity on children's career adaptability through the mediation of parental support (95% CI = [.01, .25]). Specifically, the effect of mothers' career adaptability on male students' career adaptability through parental support was found to be stronger than its effect on female students' career adaptability. Similarly, the effect of fathers' career adaptability on female students' career adaptability through parental support was found to be stronger than the effect on male students' career adaptability. No other significant interactions were found.

Discussion

This study examined the roles of parents' career values and adaptability in influencing their career-specific parenting behaviors and their children's career adaptability. The results showed that the positive effects of parents' intrinsic fulfillment values, work-life balance values, and career adaptability on undergraduates' career adaptability are fully mediated by parental support; parental engagement fully mediates the positive influence of parents' work-life balance values and the negative effect of external compensation values on youths' career adaptability. Parental interference is negatively related to work-life balance values, and positively related to external compensation values and career adaptability, but does not

significantly predict youths' career adaptability. These findings carry important implications for the current research literature.

First, although both career values and career adaptability have been found to be important predictors of individuals' own career outcomes, researchers have seldom examined their effects beyond the career domain (e.g., Rudolph, Lavigne, & Zacher, 2017). According to career construction theory (Savickas, 2013), individuals' career roles are often intertwined with the functions of other life roles, such as parent role, therefore parents' career values and adaptability may influence the way they are involved in their children's career development. The current research offers empirical support for this view and the results show that parents' career values and adaptability have a significant impact on their career-specific parenting behaviors and, further, their children's career adaptability.

Specifically, when parents highly endorse intrinsic fulfillment and work-life balance values, they tend to display more parental support behaviors, such as offering useful suggestions and opportunities, to their children. In addition, parents with high levels of work-life balance values are more likely to have high levels of parental engagement in children's career development and low levels of parental interference. These results suggest that both intrinsic fulfillment and work-life balance values can motivate parents to provide meaningful support to children without harming children's autonomy. Contrary to our hypothesis, we found a negative relationship between parents' external compensation values and engagement in children's career activities. From a conservation of resources perspective (Hobfoll, 1989), parents only have limited psychological resources, and they have to allocate these resources to various career and life-related roles based on the relative importance of these roles. It is

possible that when parents have high external compensation values, they may spend more time and energy to attain extrinsic rewards from their own careers, which may reduce their commitment to family roles and make them disengaged from their children's career development.

These results suggest that there may be multiple mechanisms accounting for the effects of parental values on parental behaviors. On the one hand, parents may project their own career values into the socialization process of their children (Darling & Steinberg, 1993). On the other hand, parents' career values may also influence the centrality of parental or career roles in their life, and consequently affect the way they allocate time and resources to parental roles (Hobfoll, 1989). Future research should integrate other perspectives, such as the conservation of resources theory, to develop a more comprehensive understanding of the mechanisms underpinning the relations between career values and parenting behaviors.

The results also indicate that parents' career adaptability has significant effects on both parental support and parental interference. These findings suggest that on the one hand, parents with a high level of career adaptability are capable of overcoming difficulties in their career endeavors, and should be able to provide relevant suggestions and opportunities for their children (Savickas, 1997). On the other hand, parents with high career adaptability may also be over-confident about their own judgments, which can result in more interference behaviors towards their children. As parental interference has been found to be negatively related to youths' career exploration (Guan et al., 2015b), it is possible that parents with a high level of career adaptability may also negatively impact their children's career management activities. Future research should continue to examine the mixed effects of

career adaptability on children's career activities and capabilities. In addition, since career adaptability is a multidimensional construct (Savickas & Porfeli, 2012), the four dimensions of career adaptability may exert distinct effects on parental behaviors. It is imperative to examine how the different dimensions of career adaptability (i.e. career concern, control, curiosity and confidence) influence parents' behaviors and the specific adaptability dimensions of their children.

The findings of current research also add new evidence to the mediation roles of career-specific parenting behaviors in explaining the effects of parents' career values and adaptability on children's career adaptability. Specifically, parental support and parental engagement fully mediate the effects of intrinsic fulfillment values, external compensation values, work-life balance values and parental career adaptability on youths' career adaptability. These findings provide strong support for the idea that parental behaviors serve as key mechanisms that explain how parents' career-related characteristics are transformed into children's adaptive capabilities ((Darling & Steinberg, 1993; Savickas, 2013). In the meantime, the results also show that parental interference does not have a significant effect on undergraduates' career adaptability. Previous research in the Chinese context also shows similar results that parental interference has a negative effect on undergraduates' career exploration, but does not have a significant effect on their career adaptability (Guan et al., 2015b). Although parental interference demotivates undergraduates' proactive career management activities, it may also make undergraduate exposed to extra information or opportunities that they have not considered before, thereby potentially improving their career adaptability. Due to the mixed effects of interference on career adaptability, its main effect is

non-significant. Future research may incorporate multiple perspectives to examine the complicated effect of parental interference on children's career adaptability. In addition, future research may continue to examine the interactions among these three types of parental behaviors on students' career adaptability and other outcomes.

Since the participants of this study are university students and their career adaptability can also be shaped by other contextual factors (Guo et al., 2014), such as the learning environments in universities and the working environments in their internships, there should be more research examining the effects of these environmental factors on university students' career adaptability, in order to achieve a more comprehensive understanding of the antecedents to career adaptability. In addition, more research should be conducted from the children's perspective, and incorporate children's individual differences as important moderators for the effects of parental influence (Savickas & Porfeli, 2012). For example, from a developmental perspective (Savickas, 2002; Super, 1980), it is possible that the influence of parental characteristics on children's career adaptability may be stronger at their earlier career stages, when children are younger and do not have many vocational experiences. When children grow older, they may be more independent and start to find their own way to develop relevant career capabilities. In addition, whether children's personality and other dispositional factors moderate the effects of parental behaviors on their career outcomes is an interesting question that awaits future research (Guan et al., 2017).

Practically, this study highlights the influence of parents' career values and adaptability on their parental behaviors and children's career adaptability. These findings can be used to help parents understand the effective ways to intervene in the career development

of their children. These results suggest that parents who value intrinsic fulfillment and work-life balance can significantly help university students develop their career adaptability through their support for and engagement in students' career activities. In contrast, parents who value extrinsic rewards tend to be less engaged in their children's career development and more likely to impose their own ideas on children, which may negatively impact students' career adaptability. Moreover, parents with a high level of career adaptability can both facilitate and impede children's development of career adaptability, depending on the specific parental behaviors associated with a high level of career adaptability. These parental characteristics can serve as important sources of information for career counselors and educators to understand how family environments shape university students' career capabilities.

Moreover, the mediation roles of parental support and parental engagement revealed in this study further suggest that career counselors and educators can use career-specific parenting behaviors as a useful tool to diagnose whether the interventions from parents are beneficial or harmful to students. This information can help to design appropriate education or intervention programs to help parents to adjust the ways in which they become involved in their children's career development. Career counselors and educators can also help students influence their parents' behaviors by offering them relevant suggestions to facilitate mutual communication between parents and children (Middleton & Loughhead, 1993). In sum, the results of this study provide important guidance for career counselors and educators to help strengthen the positive effects and reduce the negative effects of family influence on students' career adaptability.

Limitations and future directions

There are several limitations associated with this study. First, as this study adopted a cross-sectional design, we cannot draw causal conclusions on the relationship between parental influence and youths' career adaptability. It is possible that youths' career adaptability can also have an impact on parents' behaviors, career values and abilities. Future research should adopt a more rigorous design to test these relations and yield more solid results.

Second, as this study was conducted in China, which is characterized by a strong family orientation and high collectivistic values (Hofstede, 2001), it is possible that Chinese parents devote more time and effort to get involved in their children's career development, and Chinese students are more receptive to their parents' influence (Guan et al., 2015a). In an individualistic culture such as the USA, parents may be less involved in their children's career development after they enter universities, and the effects of parental behaviors on their children's career adaptability may also be different from those found in the Chinese context. For example, in an individualistic society, parents' interference behaviors may result in more resistance from their children, and may subsequently lead to more negative effects on children's career adaptability than in China. Therefore, future research should continue to examine how culture shapes career-specific parenting behaviors, as well as the effects of these behaviors on children's career behaviors and capabilities (Fouad, 2007; Fouad et al., 2008). In addition, it is possible that the sample of this study may not be representative of Chinese parents and youths as the undergraduate students in this study seem to have a relatively high level of adaptability. Future studies should corroborate the current findings by

recruiting participants from a more diverse population.

Third, findings from the supplementary analyses suggest that fathers and mothers may play different roles in shaping students' career adaptability. Specifically, the results showed that parents with a high level of career adaptability are more likely to offer support to their children of the opposite sex. However, this possibility cannot be thoroughly tested as only one parent (either father or mother) of each student was recruited to participate in this study. Future research should continue to examine whether the above findings can be replicated by recruiting both mothers and fathers from the same family as participants and by directly comparing their influence on children's career adaptability. A more systematic investigation of the different roles played by fathers and mothers in their children's career adaptability will substantively advance current understanding of this important question.

In spite of the limitations discussed above, this study extends the current literature by tapping into the influence of parents' career values and adaptability on university students' career adaptability through career-specific parenting behaviors (support and engagement). The findings of this study offer important insights on how parents' career values and adaptability influence youths' career adaptability, and pave the way for more research on how family and other environmental factors impact the career adaptability of children.

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Table 1

Descriptive Statistics, Reliability Coefficients, and Inter-Correlations among Variables

	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Students' career adaptability	4.06	.46	.93							
2. Parents' external compensation values	3.20	.76	.06	.88						
3. Parents' intrinsic fulfillment values	3.74	.57	.08	.28***	.83					
4. Parents' work-life balance values	4.17	.68	.22***	.11	.52***	.89				
5. Parental support	3.75	.69	.27***	.12	.41***	.39***	.83			
6. Parental interference	2.84	.89	-.00	.32***	-.04	-.18**	.17**	.87		
7. Parental engagement	3.60	.93	.19**	-.19**	.08	.30***	.12	-.34***	.88	
8. Parents' career adaptability	3.79	.57	.21***	.11	.47***	.40***	.51***	.03	.19**	.94

Note. $N = 264$. * $p < .05$. ** $p < .01$. *** $p < .001$. Reliability coefficients are shown in bold along the diagonal of the table.

Table 2

Hierarchical Regression Predicting Parental Support, Parental Interference, Parental Engagement and Students' Career Adaptability

Variable	PE	PS	PI	CA
Constant	-1.61	-.26	2.52*	3.98***
<i>Control variable</i>				
Sex (Students) ^a	.30*	.02	-.34**	.01
Age (Students)	.01	-.03	-.13*	.00
Year of study (Students)	.05	-.03	.07	-.08
Age (Parents)	.01	.02	.02	.00
Education (Parents)	.17**	.04	-.06	.01
Income (Parents)	.01	-.00	.01	.00
Relationship (Parents) ^b	-.06	-.04	-.10	.00
<i>Predictor</i>				
Parents' intrinsic fulfillment values	-.15	.17*	-.14	-.10
Parents' external compensation values	-.25***	.02	.41***	.05
Parents' work-life balance values	.43***	.16*	-.27**	.09
Parents' career adaptability	.15	.46***	.21*	.07
Parental engagement				.07*
Parental support				.13**
Parental interference				.00
R^2	.21	.33	.22	.14
F	6.12***	11.56***	6.41***	2.93***

Note: $N = 264$. PS = parental support; PI = parental interference; PE = parental engagement. CA = career adaptability (students). ^a female = 0; male = 1. ^b mother = 0; father = 1. * $p < .05$, ** $p < .01$, *** $p < .001$.

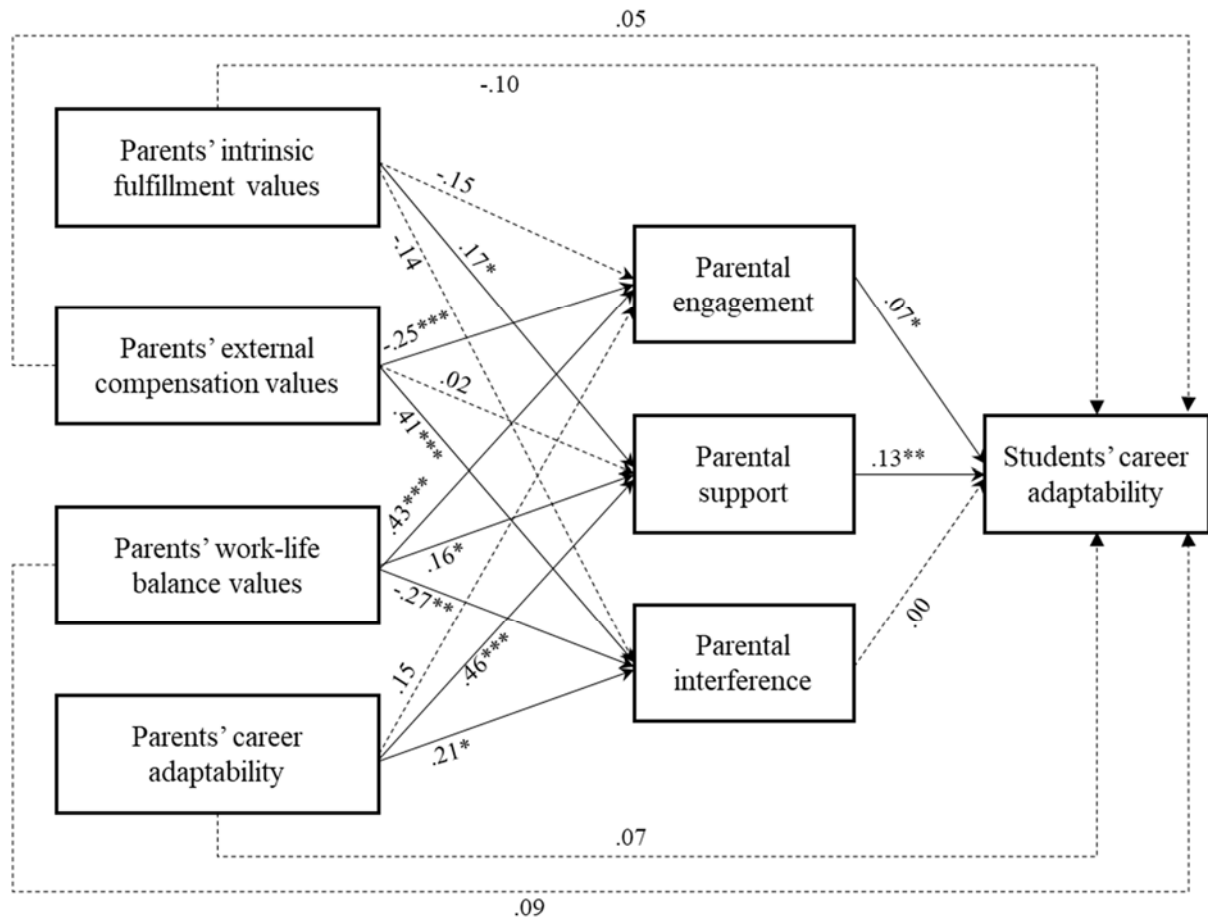


Figure 1. The path model testing for indirect effects. The significant paths are displayed in solid arrows and the non-significant paths are displayed in dashed arrows. Corresponding coefficients are shown along each path. $*p < .05$, $**p < .01$, $***p < .001$.